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ABSTRACT

To determine normative story recall behavior for 5-year-old prekindergarten children, and to compare their recall of stories with recall of comparable chronological/descriptive passages, a study tested 30 nonhandicapped prekindergarten children. Each subject was read a 95-word, second-grade level story and immediately asked to "tell me what I said." Five of the seven key story parts were recalled by a majority of the subjects, with more information recalled from stories (usually including key elements) than from descriptive passages (usually including non-essential details). Stories were usually recalled in appropriate sequence; descriptive passages were not. A related second study trained a small number of children with deficient story recall ability to recall single-episode stories, compared the learning patterns of language-disabled children with nonhandicapped children, and examined whether improved recall of stories (trained) generalizes to increased recall of descriptive passages (untrained). Compared to the average normative subject, intervention subjects learned to recall at least as many critical elements and more specific content of stories, and to use more words in the retelling. Recall of descriptive passages also improved. These findings imply that (1) 5-year-old children typically recall significant portions of stories, and in proper sequence, (2) stories are preferable to descriptive passages as learning tools for prekindergarten children, and (3) children deficient in story recall can be taught to recall as well as a normative group. (JG)

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STORY RECALL BY NORMAL AND LANGUAGE-DISABLED PREKINDERGARTEN CHILDREN: ANALYSIS AND INTERVENTION

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ANALYSIS PHASE: AIMS

1. To determine normative behavior for five-year-old prekindergarten children on a story recall task, including
   a. Number of story parts recalled
   b. Type of story parts recalled
   c. Percentage of story recalled
   d. Number of words used in recall
   e. Appropriateness of sequence of recall

2. To compare children's performance on recall of stories with recall of comparable chronological/descriptive passages.

ANALYSIS PHASE: PROCEDURES

Thirty nonhandicapped prekindergarten children (mean age 60.08 months) were individually read a 95-word, single-episode story written at second-grade level. Each subject was immediately asked to "tell me what I said." The next day each subject was read a chronological/descriptive passage of comparable length and reading difficulty and was asked in the same way to freely recall the passage. Four months later each subject was retested with the same procedure on the same story and passage as well as on a comparable story and passage. Interviews were audiotaped and later transcribed. They were scored for story parts or passage parts recalled (see transcripts following), appropriateness of sequence, number of words in retelling, and percentage of story/passage recalled. The latter was determined by a system which credited recall (verbatim or word substitution) of key elements of each clause. Fifteen percent of the nearly 600 transcripts in the analysis and intervention phases were scored by two scorers; interrater reliability in scoring was 99%.

ANALYSIS PHASE: RESULTS

Without intervention other than the regular preschool program, there was some improvement over time. At both testings, five of the seven key story parts were recalled by a majority of the subjects, as shown in the table below. Subjects consistently recalled more information from stories than from

descriptive passages, and the information they recalled usually included key elements of stories but largely non-essential details from descriptions. Stories usually were recalled in appropriate sequence. Descriptive passages typically were not.

	Stories			Descriptive Passages		
	Pretest Story 1	Posttest Story 1	Posttest Story 2	Pretest Passage 1	Posttest Passage 1	Posttest Passage 2
Percent of Free Recall	32	42	36	18	24	27
Mean No. of Clauses	4.5	5	5	2.9	4.6	3.8
Mean No. of Words	27	35	38	23	41	33
Percent Correct Sequence (computed only for subjects who recalled)	70	67	69	42	40	48

STORIES

All stories used in this study were written to fit the format shown below. All contain 90-100 words arranged into 12 clauses. All are at the second grade reading level as determined by the Spache Readability Formula. More than 100 stories fitting these requirements were evaluated by a panel of four preschool teachers, who discarded stories with vocabulary or concepts they judged to be too mature for prekindergarten children.

WHO	Frito was a fat alligator.
WHERE	He lived in a river with many other alligators.
INITIATING EVENT	One day a hunter came to the river to kill alligators. The hunter wanted to make cowboy boots from Frito's skin.
INTERNAL REACTION	Frito didn't like that idea at all. He was afraid of the hunter.
ACTION	So Frito swam under the muddy water. He stayed very still like a log for a long time.
CONSEQUENCE	The hunter didn't see Frito and went away. The alligator was safe.
RESOLUTION	He hoped the hunter would never come back. Frito celebrated by eating a purple flower.

The majority of subjects in the analysis phase of this study recalled five of the seven story parts, as shown in the percentage table below. The parts most commonly recalled are those most critical to the plot of the story.

	Who	Where	Initiating Event	Internal Response	Action	Consequence	Resolution
Pretest Story 1	69	41	50	26	56	82	50
Posttest Story 1	90	27	70	27	77	87	68
Posttest Story 2	80	27	84	21	67	50	83

DESCRIPTIVE PASSAGES

All chronological/descriptive passages used in this study were written to the format shown below. All contain 90-100 words arranged into 12 clauses. All are at the second grade reading level as determined by the Spache Readability Formula. More than 25 passages fitting this description were evaluated by a panel of four preschool teachers, who discarded passages with vocabulary or concepts they judged to be too mature for prekindergarten children.

** TOPIC SENTENCE	Grandma goes to Dillons on Wednesday to do her shopping.
* SUBTOPIC SENTENCE	First she goes to the meat department.
SUPPORTING DETAILS SENTENCES	Chicken is on sale today. Grandma asks if the bacon is fresh. She asks the butcher to cut some ham for her.
* SUBTOPIC SENTENCE	Next Grandma visits the medicine department.
SUPPORTING DETAILS SENTENCES	She buys some cough drops for Grandpa. Grandma looks at the toothpaste.
* SUBTOPIC SENTENCE	Grandma visits the gift shop at the back of the store.
SUPPORTING DETAILS SENTENCES	Some pretty dishes are for sale. The red roses cost too much money for Grandma, but she buys a basket of fruit for her neighbor.

Typically, subjects in the analysis phase of the study failed to recall the topic sentence and mentioned no more than one of the three subtopic sentences. As shown in the table below of percentages of subjects who recalled given types of sentences, recollections tended to be of supporting details, rather than of the major points of the passage.

	Topic	3ST	2ST	1ST	0ST	5-8SD	3-4SD	1-2SD	0SD
Pretest Passage 1	17	0	13	43	43	6	30	40	23
Posttest Passage 1	40	13	27	23	37	25	23	40	10
Posttest Passage 2	63	10	13	20	57	12	33	36	17

INTERVENTION PHASE: AIMS

1. To explore the process by which a small number of children with deficient story recall learn to recall single-episode stories, including
   a. Rate of learning
   b. Quantity of learning
   c. Occurence of generalization from one story part to another
   d. Maintenance of learning
   e. Retention of learning

2. To explore whether language-disabled children show different patterns in learning to recall stories than do nonhandicapped children.

3. To determine whether improved recall of stories (trained) generalizes to increased recall of chronological/descriptive passages (untrained).

INTERVENTION PHASE: PROCEDURES

Subjects were three normal and two language-disabled children with normal intelligence but deficient story recall. The three normal subjects were those who scored lowest in the analysis phase of the study. The language-disabled children were all those receiving speech/language therapy in one central Kansas county who also had 1) intelligible speech, 2) intelligence within the normal range, 3) deficient story recall when tested on the same measure as used in the analysis phase of the study, and 4) eligibility for kindergarten the following fall. Both of these children had attended daily speech therapy for one and a half years but still had significant difficulties with syntax and expressive vocabulary.

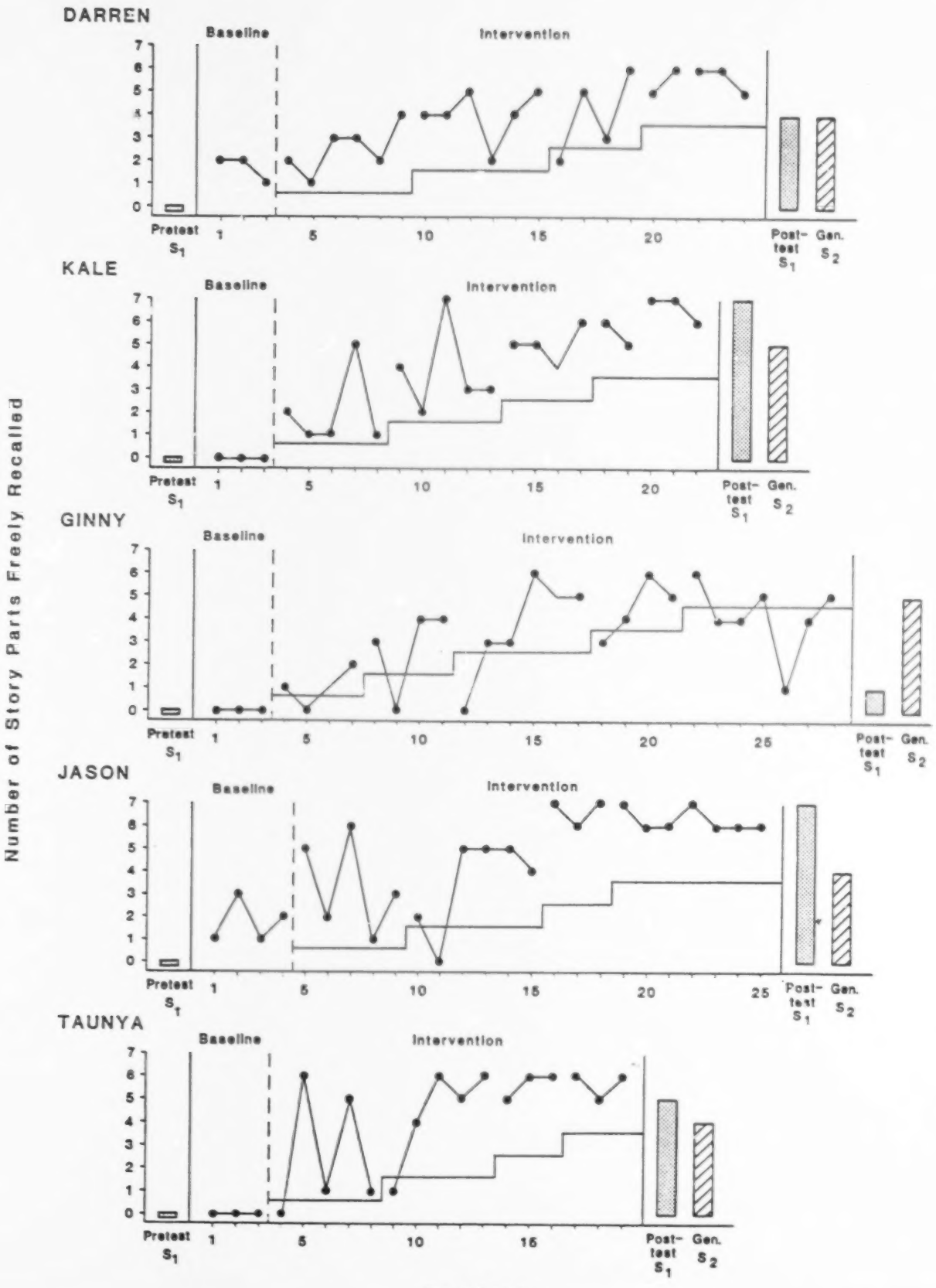
A single-subject multiple baseline across story parts design was used for each subject. Each child worked individually for 15 minutes per day for 20-30 days. The program included 1) hearing examples and being prompted to attend to a target story part prior to hearing the story, 2) discrimination probes for the target story part embedded within the story during the first two days of intervention on that story part, 3) practice in retelling stories, and 4) follow-up probes regarding each of the story parts. Maintenance sessions (3 to 7, depending upon pattern of performance) followed the intervention. Retention was tested three weeks later, along with the normative group's posttest. Daily interviews were audiotaped, transcribed, and scored as described above.

ANALYSIS PHASE: RESULTS

Although they started with marked deficiencies, all subjects learned to recall at least as many critical elements of stories as did the average subject in the normative group. Intervention subjects also learned to recall more specific content and use more words in the retelling. Recall of descriptive passages (untrained) also improved among the intervention subjects, but to a lesser degree than recall of stories. There was no significant difference between normal and language-disabled subjects in the content or in the amount of recall, though the syntax and the vocabulary of normal and disabled children differed. All subjects continued at or above the mean of the normative sample on at least one of two retention tests.

It is important to note that subjects taught to recall one, two, or even three key story parts did not always generalize these recall skills to other key story parts; for all subjects, recall of most story parts required specific teaching. Individual learning patterns differed a great deal.

While space limitations prohibit showing each child's multiple baseline across story parts here, a single graph charting each subject's performance in the changing criterion design will be presented. The first three subjects are without disabilities; the last two are language-disabled. The bar on the vertical axis indicates the range of the normative sample on story parts between pretest and posttest.


DARREN
Baseline
Intervention
KALE
Baseline
Intervention
GINNY
Baseline
Intervention
JASON
Baseline
Intervention
TAUNYA
Baseline
Intervention
Number of Story Parts Freely Recalled
Pretest S1
Post-test S1
Gen. S2
Sessions

IMPLICATIONS OF THESE FINDINGS

1. Five-year-old children typically recall significant portions of stories, and they typically do so in the proper sequence. Stories may be an excellent vehicle for teaching prekindergarten and kindergarten children targeted concepts.

2. Stores are preferable to descriptive passages as learning tools for prekindergarten children.

3. Many children deficient in story recall can be taught to do it as well as a normative group.

4. It is not certain how much of the training package used here is necessary for learning to occur. Experiemnts are planned using group training.

5. Different learning patterns are seen as children begin to recall stories; instructional plasn need to consider such differences.

6. Intervention subjects generalized a few story parts but required specific teaching on most; it is not appropriate to assume that prekindergarteners' learning to recall story parts, once begun, will continue without instruction.

7. Intervention subjects came to use many more words in the retelling task than normative subjects used; parents and preschool teachers noted increased talking by intervention subjects in other settings. Story retelling may facilitate increased language output.

NOTE: If you would like to see additional data from this project and receive an account of the entire experiment when it is submitted for publication, please write to the first author, care of the Associated Colleges of Central Kansas, 105 E. Kansas, McPherson, KS 67460.